



XOPlate

**Rear Differential Guard
For Jeep Grand Cherokee (WK2)
(XO-WK2-DIFF)**

Installation and Owners Guide
Revision A

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Welcome to the Gleaming Alloy Family!

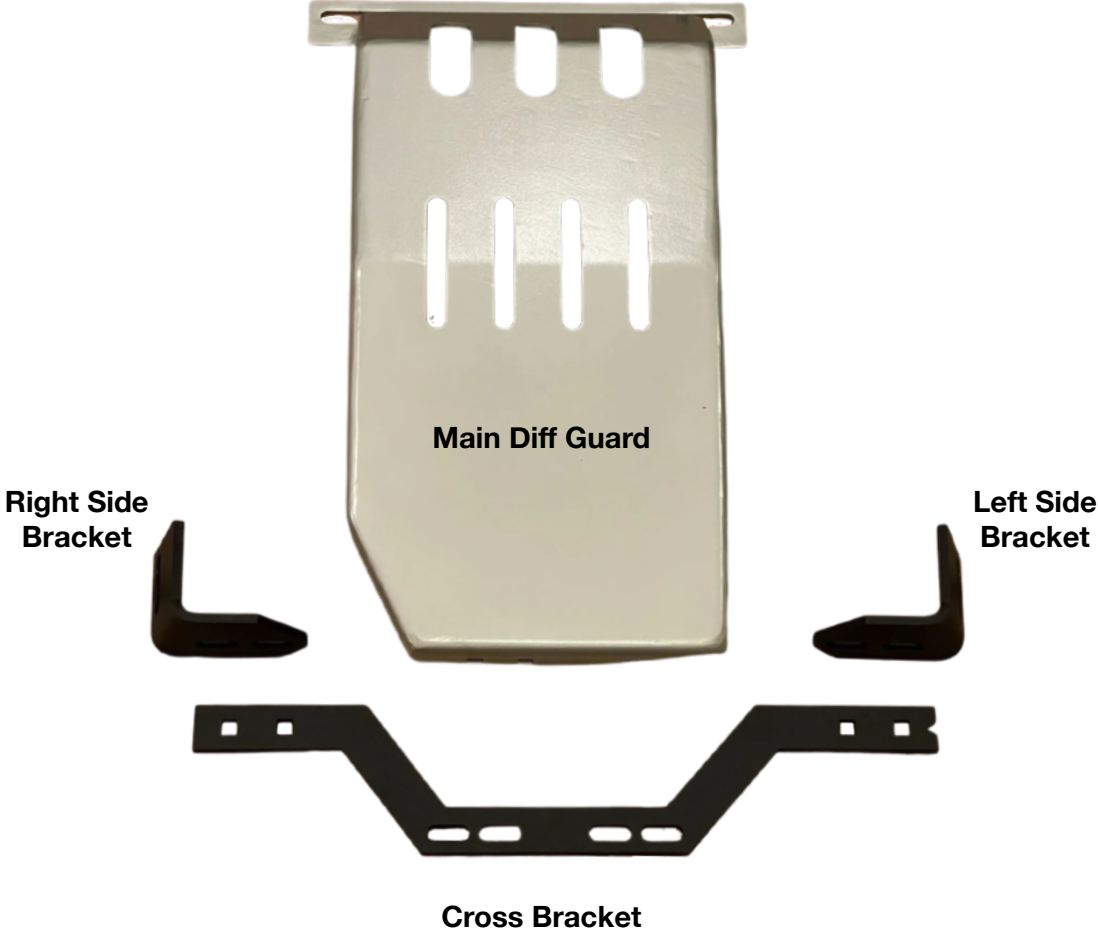
We'd like to sincerely thank you for purchasing this XOPlate Rear Differential Guard for Jeep Grand Cherokee WK2! It is our debut product in the XOPlate line and, with your continued support, the first of many such products for the Jeep Grand Cherokee WK2 and other platforms.

This rear diff guard is the result of several collective years of off-roading the Jeep Grand Cherokee WK2 platform. While the rear differential on the Grand Cherokee is tucked up pretty nicely, it is not impervious to obstacle strikes and subsequent damage. The XOPlate is extremely tough and designed to protect against glancing blows as well as crushing strikes. These are the kind of hits that occur when sliding off of rock or a v-notch and falling onto obstacles such as sharp boulders. With the XOPlate installed, you can rest assured that your rear differential is as protected as it possibly can be!

We're very confident that this XOPlate Rear Diff Guard will enhance your off-road experience. We hope you enjoy them as much as we enjoyed developing them and bringing them to market!



Get to Know Your XOPlate Rear Diff Guard...



Installation Instructions

Please read completely through the following guide before attempting the installation. It will give you a good feel for what is involved to install the rear diff guard. Overall, it is not particularly complicated and should require less than an hour. Having an assistant can make the task easier.

This installation guide is targeted at the DIY'er who is installing the rear diff guard at a home workshop, either inside a garage or in the driveway. If you are a professional mechanic and/or have access to a professional facility and tools, you will obviously be able to replace many of the steps with more efficient techniques and equipment. All the more reason to read through the instructions first to plan your strategy!

Parts List

- 1 Main Diff Guard
- 1 Right side mounting bracket
- 1 Left side mounting bracket
- 1 Cross mounting bracket
- 2 M8x1.25 20mm flanged-head bolts
- 4 M8x1.25 25mm carriage bolts
- 4 M8x1.25 20mm carriage bolts
- 2 M8x1.25 25mm socket head bolts
- 2 M8 washers
- 12 M8x1.25 serrated flange nuts

Required Tools

- 5mm Allen wrench
- 13mm socket
- 13mm open-end wrench

Note: All bolts use the exact same size serrated hex nut. All bolts should be torqued to 25. Ft-lbs (34 Nm), which is equivalent to a strong (but not excessive) hand-tightening with an 8" wrench.

Where To Get Help

Should you have any questions about installation, or problems during the installation process, feel free to reach out to us for assistance. You can send email to info@gleaming-alloy.com or use Facebook Messenger to message Gleaming Alloy Fabrication. If you have a particular issue, please accompany it with photographs showing the nature of the problem.

Step 1: Raise the rear

While you can install the XOPlate Rear Diff Guard without lifting the vehicle, we highly recommend backing the vehicle up an auto ramp or similar device. If you don't have a ramp, backing over paving bricks or even blocks of wood can help give you some breathing room. If you have air suspension, setting it in Offroad 2 will also help.

If you decide to jack the vehicle up, be sure to use some jack stands to prevent the vehicle from falling on you!

Step 2: Secure the vehicle

Using wheel chocks, blocks of wood or similar devices, secure the front wheels of your Jeep to keep it from rolling.



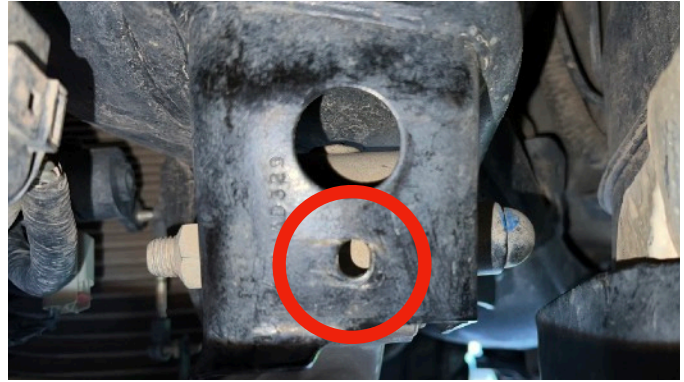
Step 3: Locate left control arm mount

On the left side of the vehicle, locate the left-rear control arm. It is mounted to the sub-frame at two locations. You want to locate the frontmost mount, which is about even with the front of your differential.



Step 4: Fasten the left side bracket

When you look closely at the control arm mount, you'll see a large and small hole. The small hole is towards the bottom of the vehicle and is what will be used to bolt the left side bracket into place.



Position the bracket so that the long slot sits over the small hole and that the 90° bent face of the bracket is towards the front of the vehicle.



Insert a flanged hex head M8x1.25 20mm bolt through the slot and control arm hole.



Thread a serrated, flanged nut onto the bolt. Finger tighten it enough to keep the side bracket in place but not so tight that you can't slide the bracket along the slot.



Step 5: Fasten the right side bracket

Repeat step 4 but for the right side bracket on the right control arm mount. The process is the same. Make sure the 90° bent face of the bracket is facing the front of the vehicle.



Step 6: Fasten the cross bracket

The cross bracket will connect to both the left and right side mounting brackets and will span below your driveshaft. You will have to weave the bracket into position, which may be a bit tricky if you have dual exhaust.

Note: The bracket is not symmetric. The end with a triangular notch in it must face the left side of the vehicle.



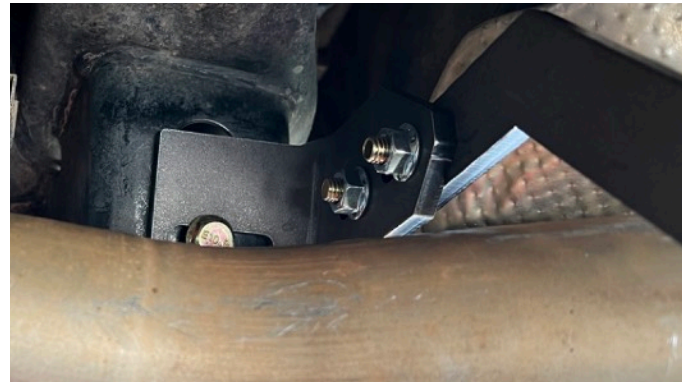
The cross bracket connects to each side bracket using two M8x1.25 25mm carriage bolts. **These are the longer of the two carriage bolt sizes provided in the kit.** The cross bracket goes in front of the side brackets and the carriage bolts are inserted in front of the cross bracket.

Tip: Slide the side brackets toward the rear of the vehicle to provide more room to insert the carriage bolts



Finger tighten the serrated, flanged nuts onto all four carriage bolts. You want them tight enough to hold the cross bracket into place but not so tight that you can't slide the cross bracket left-to-right along the slots in the side mounts.

At this point, with all brackets in place, slide them as a unit as far as possible towards the front of the vehicle.



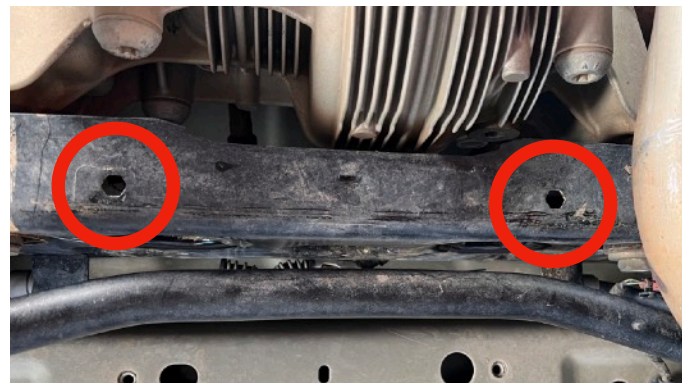
Step 7: Insert the rear socket-head bolts

Now focus your attention towards the rear of the vehicle and the sub-frame crossmember behind the differential.



Locate the two hexagonal shaped holes in the crossmember. This is where the long socket-head bolts will be inserted.

Note: some older WK2 models may not have these two holes in the crossmember. If this happens to be the case, you'll have no choice but to drill two holes in the crossmember for these bolts. Skip ahead to Step 8 for a tip on how you can use the diff guard itself as a template for where to drill the holes.



Make sure the socket-head bolt has a washer installed on it, then guide the bolt down from the *inside* of the crossmember. When fully inserted, it will appear as in this photo. Repeat for both holes in the crossmember.

Tip: It helps to be looking up directly under the hole to help guide the bolt into the hole.

Tip: If you have difficulty reaching your fingers into the hollow space behind the crossmember, you can use masking or duct tape to tape the bolt & washer onto the end of a 5mm Allen wrench, then use that to guide the bolt into place.



With both socket head bolts installed, your crossmember should look like this photo.



Step 8: Position the main diff guard

On the front of the main diff guard, there are four square holes where the four M8x1.25 20mm carriage bolts will be installed. **These are the shorter of the two carriage bolt sizes that are part of the kit.** Insert the carriage bolts on the *inside* of the diff guard, facing towards the front of the vehicle.

Tip: It may help to use masking or duct tape over the heads of the carriage bolts to keep them from popping out of position.



Hold the diff guard under your differential in the orientation that it will be installed and then guide the four carriage bolts protruding from the front of the diff guard into the four slots of the cross bracket. Once all bolts have been inserted, finger tighten four serrated, flanged head nuts onto the ends of the bolts. Tighten them enough to hold the front of the diff guard against the cross bracket, but not so tight that the diff guard can't be slid left-to-right along the cross bracket's slots.

Tip: An extra set of hands is useful for this step!



Carefully raise the rear of the diff guard so that the two bolts protruding from the sub-frame crossmember are inserted into the two slots at the back of the diff guard. Be careful not to push these bolts back into the hollow crossmember, since retrieving them can be quite difficult. Once the bolts have been inserted through the two slots, finger-tighten two serrated, flanged head nuts onto the bolts so the diff guard doesn't fall.

Note: If your crossmember does not have the two hexagonal holes, it is here where you can push the diff guard up against the cross member and mark the center of the slots so that you can drill holes into the crossmember.



Step 9: Adjust the diff guard position

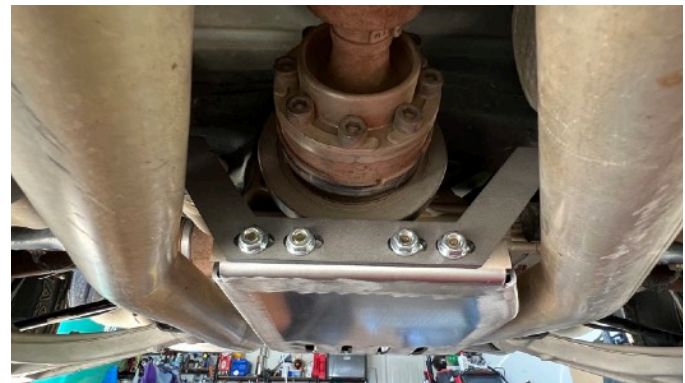
At this point you are ready to move the diff guard into its final position. There is quite a bit of left-to-right adjustability due to the use of slots in the diff guard, the cross bracket and the side brackets.

If you have dual exhaust, try to center the diff guard between the two exhaust pipes.

If you have single exhaust, try to position the diff guard a comfortable distance away from the exhaust.

In both cases, make sure the cross bracket is free and clear of the exhaust pipes.

Tip: There is a small degree of adjustability in the vertical direction, too. If the bottom of the cross bracket is touching a pipe, push up on the front of the diff guard to raise the cross bracket up.



Step 10: Tighten all bolts

With the diff guard properly positioned, it's time to tighten all your bolts. Start with the hex head bolts holding the side brackets to the control arm mounts. You will need to insert an open-end wrench onto the nut and tighten the bolt head firmly with a socket wrench or another open/box end wrench. If you need to push up for cross bracket clearance, do this while tightening these bolts.

After tightening both side brackets, make sure the diff guard is still positioned properly left-to-right. Adjust as necessary. Once you are satisfied, tighten the two bolts on the rear of the diff guard. To do this, you will need to insert an Allen wrench into the socket head inside the hollow crossmember, and then tighten firmly with a socket wrench.

With the rear bolts tightened, you can then firmly tighten all eight serrated flange nuts on the front of the diff guard and both side brackets.



**You have successfully completed installation of your
XOPlate rear diff guard! Go have a beer!**

Care and Use

The XOPlate Rear Differential Guard is relatively maintenance free. After you have installed the guard and driven about 500 miles, double check all your bolts and re-tighten, if necessary. Periodically checking the tightness of the bolts, especially after a wheeling adventure, is a good idea.

After hitting many trails and encountering obstacles, your XOPlate will inevitably develop scratches and maybe even small dings if you've hit some hardcore trails. Periodically cleaning the diff guard and hitting it with some paint will prevent rust from taking hold.